

REMARKS

Claims 1-60 are pending. Claims 54-60 were objected to for informalities. The informalities are believed corrected with the noted amendments. Claims 34-51 were rejected for under 35 U.S.C. 101 because the Examiner argued that the claimed inventions are directed to non-statutory subject matter. Independent claim 34 has been amended to clarify the computer program product claim. Consequently, the rejections based on informalities and the rejections to claims 34-51 are believed overcome.

Independent claims 1 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneck (U.S. Patent Application 2001/0021926) in view of Amano et al. (US Patent 6,557,020). Independent claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneck, Amano, and Ginter et al. (U.S. Patent 5,892,900). Independent claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (U.S. Patent Re. 31,736) in view of Ginter, Winkelman (U.S. Patent 4,435,752), and DeRoo (USP 5,802,376). Independent claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winkelman, DeRoo, Ginter, and Mueller.

Claims 1 and 54

Independent claims 1 and 54 cover a method and system, respectively, "for generating operationally limited hardware and software, the method comprising: identifying license information associated with a protected intellectual property block configured for implementation on a device; generating operationally limited hardware and software, wherein the hardware and software is operationally limited using license information associated with the intellectual property block." The examiner rejected these claims under 35 U.S.C. 103(a) using Schneck and Amano.

Schneck describes "a method of distributing digital data for subsequent controlled use of the data by a user. The method includes protecting portions of the digital data; preventing access to the protected portions of the data other than in a non-usable form; determining rules concerning access rights to the data; protecting portions of the digital data and the protected rules; Application No: 09/823,700

and providing the protected portions of the digital data and the protected rules. The user is provided controlled access to the data only in accordance with the rules as enforced by a tamper detecting access mechanism." (Paragraph 0050.) As noted by the Examiner, Schneck fails to teach a method for generating operationally limited hardware, the method comprising; identifying license information associated with a protected intellectual property block configured for implementation on a device generating operationally limited hardware, wherein the hardware is operationally limited using license information associated with the intellectual property block.

Amano discloses, in the context of hardware, "[a] decryption key (private key) in accordance with the RSA method is disclosed by license to the end user who is using the functional block developed by Company A within this system LSI. Among the users of this system LSI, only end users who possess the decryption key can use this functional block. To use the functional block developed by Company A in this configuration, it is necessary to acquire the decryption key from Company A by license, simplifying the management of intellectual property rights." (Column 7, line 65 to column 8, line 8.) Although Amano does discuss the use of a "license key" to control access to a functional block, the use of a license key is not equivalent to "generating operationally limited hardware." A user who is granted a license key under Amano receives full access to the protected functional block, in contrast the present application refers to the generation of operationally limited hardware In addition, Amano does not teach the use of creating hardware that is "operationally limited using license information associated with the intellectual property block."

Consequently, Amano fails to teach the generation of operationally limited hardware and the use of license information associated with the intellectual property block to define the operational limits. Because the combination of Schneck and Amano fails to teach the generation of operationally limited hardware and software, it is submitted that independent claims 1 and 54, and their dependants, are patentable.

Claim 34

Amended claim 34 covers "a computer program product associated with a computer Application No: 09/823,700 -9-

readable medium including computer code for generating operationally limited hardware and software, the computer program product comprising; computer code for identifying a protected intellectual property block associated with a design; computer code for identifying a parameter using license information associated with the protected intellectual property block; computer code for generating operationally limited hardware and software, wherein the hardware and software is operationally limited based on the parameter identified using license information.” The examiner rejected these claims under 35 U.S.C. 103(a) in light of Schneck, Amano, and Ginter. Schneck and Amano are discussed above.

The examiner acknowledged that the combination of Schneck and Amano does not teach (1) computer code for identifying a parameter using license information associated with a protected intellectual property block or (2) the resulting hardware and software being operationally limited based on the parameter identified using license information. The examiner relies on Ginter to cover these aspects of claim 34. However, the seven cited portions of Ginter do not address these two aspects of claim 34.

The first reference is to “[a]uthorization passwords and protocols, license servers, ‘lock/unlock’ distribution methods, and non-electronic contractual limitations imposed on users of shrink-wrapped software are a few of the more prevalent content protection schemes.” (CL2, L66 to CL3, L3). This reference does not discuss computer code for identifying a parameter using license information or the generation of operationally limited hardware and software. Furthermore, the next sentence in Ginter states “In a commercial context, these efforts are inefficient and limited solutions.” (CL3, L3-5). This statement indicates that the referenced art is ineffectual in adequately protecting intellectual property interests.

The second reference is to “VDE allows the owners and distributors of electronic digital information to reliably bill for, and securely control, audit, and budget the use of, electronic information. It can reliably detect and monitor the use of commercial information products.” (CL3, L18-22). This reference does not discuss computer code for identifying a parameter using license information or the generation of operationally limited hardware and software. In particular, the citation does not discuss the generation of operationally limited hardware.

The third reference is to “[a] given piece of content may be subject to different control information at different times or places of handling, depending on the evolution of its content control information” (Summary of CL47, L66 to CL48, L31). This reference does not discuss computer code for identifying a parameter using license information or the generation of operationally limited hardware and software. The use of the term “content,” as used in the Ginter, does not cover hardware. Nor does the reference cite the generation of operationally limited hardware.

The fourth reference is to a “distributor 106 distributing rights to use the content by sending the content’s ‘rules and controls’ to a content user 112 such as a consumer. The content user 112 uses the content in accordance with the usage-related ‘rules and controls.’” (CL56, L25-29). This reference does not discuss the use of license information to generate operationally limited hardware and software.

The fifth reference is to the use of “permission records” to specify “the rights associated with the object 300 such as, for example, who can open the container 302, who can use the object’s contents, who can distribute the object, and what other control mechanisms must be active.” (Summary of CL59, L42-52). This reference does not discuss the use of license information to generate operationally limited hardware and software.

The sixth reference is to rules and controls for managing “if and how content 304 and other information is to be scrambled and descrambled, and other processes associated with handling and controlling information content 304. For example, methods 1000 may record the identity of anyone who opens the electronics container 302, and can also control how information content is to be charged based on ‘metering.’” (CL59, L62 to CL60, L3). This reference does not discuss the use of license information to generate operationally limited hardware and software.

The seventh reference is to the use of “traveling objects in the publishing of software” that “may allow potential customers to use the software in a demonstration mode, and possibly to

use the full program features for a limited time before having to pay a license fee." (Summary of CL140, L25-34). Although this reference does describe the use of "software in a demonstration mode", it does not discuss the use of license information to generate operationally limited hardware.

The Schneck, Amano, and Ginter references taken alone or in combination fail to teach or suggest the use of license information to generate operationally limited hardware. It is therefore respectfully submitted that independent claim 34 and its dependants are patentable over the combination of Schneck, Amano, and Ginter.

Claims 22 and 30

Amended claims 22 and 30 cover, respectively, a method and hardware device "for disabling a hardware device, the method comprising; identifying a run time limit that is (i) long enough to permit testing of the hardware in a prototype manner and (ii) too short for use of the hardware in a production manner, wherein the run time limit is configured at least in part using license information associated with a protected intellectual property block implemented on the hardware device; measuring the time elapsed during the operation of the hardware; disabling the hardware after the time elapsed reaches the run time limit." The examiner rejected this claim under 103(a) in light of Mueller, Winkelman, DeRoo, and Ginter.

Mueller describes a "game length circuit in the form of a timer of a score counting circuit that has a time limit or the number of points scored, to disable the game circuitry." (CL1, L50-52). Although this reference does disclose a "run time limit," the Examiner acknowledges that Mueller does not teach identifying a run time limit that is (i) long enough to permit testing of the hardware in a prototype manner and (ii) too short for use of the hardware in a production manner. Nor does Mueller disclose a run time limit that is configured at least in part using license information associated with a protected intellectual property block implemented on the hardware device.

The Examiner relied upon Winkelman to for the disclosure of identifying a run time limit

that is (i) long enough to permit testing of the hardware in a prototype manner and (ii) too short for use of the hardware in a production manner. The cited reference is to “[c]ontext switches of the central processor may be forced by the master controller when a high priority step needs to be assigned to immediate central processor execution. Priority steps may also be forced from execution when they have exceeded a given time limit or for the purpose of time slicing the central processor. The central processor step is normally context switched automatically by the hardware for step termination.” (CL21, L58-65). Context switching on a central processor and assigning priority steps on a central processor are not methods of selecting an appropriate run time for a hardware prototype. The referenced language therefore does not discuss hardware prototyping, nor does the reference discuss the selection of a run time that is long enough to permit testing but too short for use of the hardware in a production manner. Furthermore, Winkelman teaches the use of context switching and assigning priority steps in the context of a production, not testing, environment. In this sense, Winkelman teaches away from the language of claim 22, which pertains to the use of a hardware device in a testing environment.

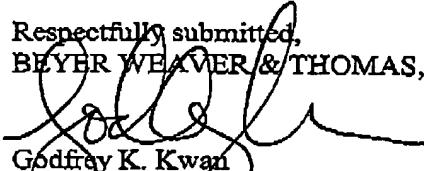
The Examiner relied upon the seven portions of Ginter, discussed above in the in reference to independent Claim 34, to teach a run time limit configured at least in part using licensed information associated with a protected intellectual property block implemented on a hardware device. As noted in the above discussion, Ginter appears to refer only to computer software and does not discuss the generation of a run time limit in a hardware device. None of the references, either alone or in combination, teach or suggest the generation of a run time limit in a hardware device. It is therefore respectfully submitted that independent claim 22 and 30 and their dependants are patentable over the combination of Mueller, Winkelman, DeRoo, and Ginter.

Although the claims are believed allowable in their current form, claim 22 has been amended to further distinguish the claim from cited art references. Claim 22 has been amended to recite “wherein the hardware is a programmable device configured using a software tool having access to a plurality of preconfigured functional blocks.” The amendment is supported on page 3 lines 4-17 of the present application. In one example, “The user, in conjunction with software supplied by the manufacturer or created by the user or an affiliated source, can program

the PLD to perform a particular function or functions required by the user's application. The PLD then can function in a larger system designed by the user just as though dedicated logic chips were employed. One such improvement is the development of so-called "megafunctions" by companies such as Altera Corporation. A more complete description of these megafunctions and their uses can be found at "www.altera.com" and in various materials published by Altera. Briefly, megafunctions are ready made, pre-tested functional blocks that complement and augment existing design methodologies. When implementing complex system architectures, these megafunctions significantly enhance the design process. By using megafunctions, designers can focus more time and energy on improving and differentiating their system-level product, rather than re-designing common, off the shelf functions."

None of the references cited teach or suggest generation of a run time limit in a hardware device where the "hardware device is a programmable device configured using a software tool having access to a plurality of preconfigured functional blocks." Consequently, claim 22 is also believed allowable for this reason.

In light of the above remarks relating to independent claims and certain dependent claims, the remaining dependent claims are believed allowable for at least the reasons noted above. Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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